## INVESTIGATOR'S ANNUAL REPORT

## **National Park Service**

All or some of the information provided may be available to the public

Reporting Year: 2002	Park: Shenandoah NP
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Additional investigators or key field assistants (first name, last name, office phone, office email):	
No co-investigators	
Permit#: SHEN-2002-SCI-0020	
Park-assigned Study Id. #: SHEN-00270	
Project Title:  A preliminary assessment of lead arsenate in old apple orchard soils in Virginia.	
Permit Start Date:	Permit Expiration Date
Sep 05, 2002	May 31, 2003
Study Start Date: Sep 05, 2002	Study End Date Dec 31, 2003
Study Status: Continuing	
Activity Type: Research	
Subject/Discipline: Soils	
Objectives:  My objective for this study is to assess pesticide residues, specifically lead arsenate, in old apple orchard soils in Virginia. Lead arsenate was extensively used in apple orchards as a insecticide from the 1890's until the mid 1940's when DDT was introduced. Arsenic and lead accumulate in the soil and persist in the environment long after it's been applied. I'm interested in measuring the levels of contaminates (arsenic and lead) in the soil to deteremine if these levels are high enough to warrent remediation. I'm sampling orchards that are found on public land, like Shenandoah National Park, to avoid disclosure laws that come with privately owned land.	
Findings and Status:  My research permit wasn't renewed until this past January and I haven't been up to my site since last Fall. I plan on going next month to finally get my soil samples. I'm hoping that my results from this orchard site match what I have found at other sites around the state. The history of the site leads me to believe I'll find what I'm looking for.	
For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?  No	
Funding provided this reporting year by NPS:	Funding provided this reporting year by other sources:
Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	
Full name of college or university:	Annual funding provided by NPS to university or college this reporting year:

n/a

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